

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number  
**WO 2005/064318 A1**

(51) International Patent Classification<sup>7</sup>: **G01N 21/64**,  
G01J 1/04, 1/42

(21) International Application Number:  
PCT/EP2004/014484

(22) International Filing Date:  
20 December 2004 (20.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0329849.4 23 December 2003 (23.12.2003) GB

(71) Applicant (for all designated States except US): **PRE-  
CISENSE A/S** [DK/DK]; Dr. Neergaards Vej 3, DK-2970  
Hørsholm (DK).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **AASMUL, Søren**  
[DK/DK]; Borgmester Schneiders Vej 60, DK-2840 Holte  
(DK).

(74) Agent: **SMART, Peter, J.**; Beck Greener, Fulwood House,  
12 Fulwood Place, London WC1V 6HR (GB).

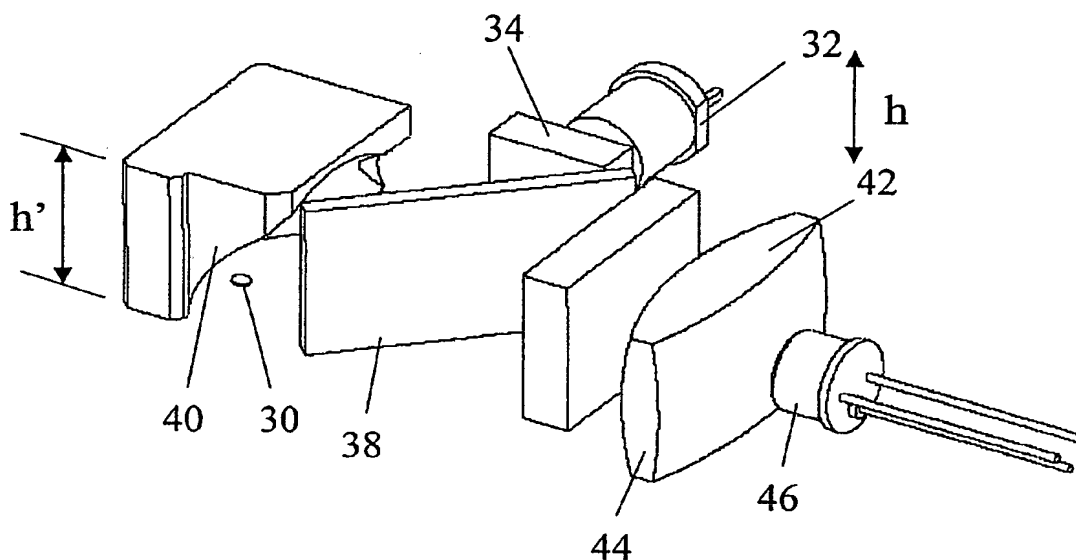
(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

Published:  
— with international search report

[Continued on next page]

(54) Title: **FLUOROMETERS**



(57) Abstract: In apparatus for the production and detection of fluorescence at a sample surface, the height of the apparatus above the sample surface is reduced, and loss of the emitted fluorescence due to reflection loss and light scattering is minimized. The apparatus comprises a three-dimensionally curved light reflecting surface (40) that directs light from a light source (32) transversely to its original path and focuses the light on to an illumination zone (30) at or below the sample surface. The reflecting surface (40) also collects, directs and at least partially collimates emitted fluorescence transversely to its original path and towards a detector (46).

WO 2005/064318 A1

**WO 2005/064318 A1**



---

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*